Claims

1. Planetary gear for mounting on an electromotor with planetary gear wheels (10) fitted in a rotating planetary carrier (8) that forms the output and which are in simultaneous gear-tooth engagement with a sun gear (12) and an annular gear (14) positioned in a housing (2), such that the sun gear (12) is connected to a rotating sun gear shaft (4), which is made hollow in a receiving area (16) to receive an output shaft of the electromotor, a sealing element (22) being provided between the sun gear shaft (4) and the housing (2), characterized in that the sealing element (22) is located axially outside the receiving area (16) for the output shaft of the electromotor, in an axial section of the sun gear shaft (4) with a reduced outer diameter compared to the receiving area (16).

2. Planetary gear according to Claim 1, characterized in that there is at least one bearing (28) for the sun gear shaft (4), whose inner ring is located axially outside the receiving area (16) for the output shaft of the electromotor on an axial section of the sun gear shaft (4) with a reduced outer diameter compared to the receiving area (16).

3. Planetary gear according to Claim 2, characterized in that the outer bearing ring of the bearing (28) for the sun gear shaft (4) is positioned in the planetary carrier (8).

4. Planetary gear according to either of Claims 2 or 3, characterized in that the bearing (28) for the sun gear shaft (4) is located radially inside an inner ring of a planetary carrier bearing (30) and axially at least partly within the space occupied by the planetary carrier bearing (30).

5. Planetary gear according to any of the preceding claims, characterized in that the planetary carrier (8) has through-going bores (34, 36) on either side of each planetary gear wheel (10) to accommodate a planetary bearing pin (38) on which the planetary gear wheel (10) is mounted to rotate, and the planetary bearing pin (38) abuts with its end face against inner bearing rings of planetary carrier bearings (30, 32), so that the planetary bearing pin (38) is secured against axial displacement.

6. Planetary gear according to any of Claims 3 to 5, characterized in that an annular groove (48) is provided in the planetary carrier (8) to receive a circlip (46), which is axially adjacent to a functional surface (47) that receives the outer bearing ring of the bearing (28) for the sun gear shaft, and the outer bearing ring is secured against axial displacement in one direction by the circlip (46).

7. Planetary gear according to any of Claims 2 to 6, characterized in that the sun gear shaft (4) is mounted so that it can be axially displaced against the restoring force action of an elastic compensating element (56).

8. Planetary gear according to Claim 7, characterized in that the axial compensating element is positioned axially between a face of the outer bearing ring opposite the circlip (46) and a functional surface (54) of the planetary carrier (8).

9. Planetary gear according to Claim 8, characterized in that the elastic compensating element is an O-ring (56).

10. Planetary gear according to any of Claims 2 to 6, characterized in that the sun gear shaft (4) is fitted so that it cannot move axially relative to the housing (2) and a spring-disc coupling is arranged between the sun gear shaft (4) and the output shaft of the electromotor to compensate axial displacements.

11. Planetary gear according to any of the preceding claims, characterized in that the diameter of the functional surface (26) of the sun gear shaft (4) associated with the sealing element (22) is smaller than the diameter of the bore (18) in the receiving area (16) of the sun gear shaft (4).

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